

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A porous inorganic membrane having an external face and internal face, comprising at least one inorganic phase having separating properties, characterized in that it has a carbon content representing 0.05% to 25% by weight with respect to the mass of said inorganic phase and in that the carbon is distributed in the ~~porosity in a~~ pores of the membrane in an increasing graduated manner.

Claim 2 (Original): A porous inorganic membrane according to claim 1, characterized in that it has a carbon content representing 0.1% to 10% by weight with respect to the mass of said inorganic phase.

Claim 3 (Original): A porous inorganic membrane according to claim 2, characterized in that it has a carbon content representing 1% to 8% by weight with respect to the mass of said inorganic phase.

Claim 4 (Currently Amended): A porous inorganic membrane according to ~~one of claims 1 to 3,~~ claim 1 selected from the group consisting of zeolitic membranes, modified zeolitic membranes, aluminosilicate membranes, silica membranes, alumina membranes and composite membranes.

Claim 5 (Currently Amended): A porous inorganic membrane according to ~~one of claims 1 to 4~~ claim 1, characterized in that it is supported.

Claim 6 (Currently Amended): A porous inorganic membrane according to ~~one of claims 1 to 5,~~
~~characterized in that it has~~ claim 1, having a pore size that is strictly less than 2 nm.

Claim 7 (Currently Amended): A porous inorganic membrane according to ~~one of claims 1 to 5,~~
~~characterized in that it has~~ claim 1, having a pore size in the range of 2 to 50 nm.

Claim 8 (Currently Amended): A process for preparing a porous inorganic membrane according to
~~one of claims 1 to 7~~ claim 1, comprising a step a) ~~consisting of~~ bringing a porous carbon-free
inorganic membrane comprising at least one inorganic phase having separating properties into
contact with a hydrocarbon feed at a temperature in the range 20°C to 550°C, followed by a step b)
~~consisting of~~ bringing the membrane from step a) into contact with a hydrocarbon feed at a
temperature in the range 20°C to 550°C with the provision thereof in step (a) the hydrocarbon feed
contacts the inorganic membrane at higher flow rate than in step (b).

Claim 9 (Currently Amended): A preparation process according to claim 8, in which said
hydrocarbon feed is selected from the group consisting of olefins, polyolefins, acetylenes,
polyacetylenes, aromatics, polyaromatics, molecules containing one or more aromatic nuclei with
one or more hydrocarbon chains, hydrocarbon molecules containing heteroatoms and hydrocarbon
molecules containing functionalized groups.

Claim 10 (Currently Amended): A preparation process according to claim 8 ~~or claim 9~~, in which
each of steps a) and b) is carried out at a constant temperature.

Claim 11 (Currently Amended): A preparation process according to claim 8 ~~or claim 9~~, in which steps a) and b) are carried out using a non isothermal thermal program.

Claim 12 (Currently Amended): ~~Use of a membrane according to one of claims 1 to 7 or prepared according to one of claims 8 to 11 in~~ In a process separating non-condensable molecules with dimensions of less than 0.8 nm contained in a hydrocarbon feed, comprising contacting an external surface of a separating membrane, the improvement wherein the membrane is according to claim 1.

Claim 13 (Currently Amended): Use A process according to claim 12, in which said non-condensable molecules are selected from the group consisting of hydrogen, oxygen, helium, nitrogen, hydrogen sulphide H₂S, carbon monoxide CO, carbon dioxide CO₂ and methane.

Claim 14 (Currently Amended): ~~Use of a membrane according to one of claims 1 to 7 or prepared in accordance with one of claims 8 to 11 in association~~ A process according to claim 12, further comprising passing permeate from said membrane in contact with at least one catalyst.

Claim 15 (Currently Amended): Use A process according to claim 14, ~~in~~ comprising a hydrocarbon hydroconversion ~~reactions~~ reaction.

Claim 16 (Currently Amended): Use A process according to claim 14, ~~in~~ comprising an oxidation ~~reactions~~ reaction.

Claim 17 (New): A porous inorganic membrane according to claim 1, wherein the carbon content is distributed so that the carbon content represents 1% to 3% by weight with respect to the mass of the first third of the inorganic phase having separating properties, 6% to 8% by weight with respect to the mass of the second third of the inorganic phase having separating properties and 15% to 20% by weight with respect to the mass of the third of the inorganic phase having separating properties.